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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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David W. Cannell

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22852

7590

05/21/2009

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EXAMINER

SHEIKH, HUMERA N

ART UNIT

PAPER NUMBER

1615

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/614,118	Applicant(s) CANNELL ET AL.	
	Examiner Humera N. Sheikh	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30,47-50 and 52-56 is/are pending in the application.
- 4a) Of the above claim(s) 1-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30,47-50 and 52-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Application

Receipt of Applicant's Arguments/Remarks and request for extension of time (1 month-granted), all filed 02/02/09 is acknowledged.

Claims 1-30, 47-50 and 52-56 are pending in this action. No amendments to the claims have been made herein. Claims 31-46 and 51 have previously been cancelled. Claims 1-29 have previously been withdrawn (based on non-elected invention). Claims 30, 47-50 and 52-56 remain rejected.

* * * * *

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 30, 47-50 and 52-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wisotzki *et al.* (hereinafter "Wisotzki") (U.S. Pat. No. 4,900,545).

Wisotzki ('545) teaches a method for the regeneration of hair split-ends and for caring for and revitalizing mistreated hair, comprising applying to the hair, a treatment composition comprising mono- or disaccharides, more especially, the pentoses (5 C-atoms) and hexoses (6 C-atoms), and also the disaccharides derived from the pentoses and hexoses (see reference column 1, line 49 through col. 2, line 49).

Wisotzki teaches that the mono- or disaccharides are any aldoses and ketoses or their mixtures. Wisotzki further teaches that suitable monosaccharides include glucose, mannose, galactose, ribose, arabinose, xylose, fructose and sorbose, while suitable disaccharides include

Art Unit: 1615

sucrose, lactose, maltose and cellobiose (col. 2, line 36-49). Also suitable are naturally occurring or technical mixtures wherein the mentioned mono- or disaccharides are predominant. Glucose is used as an example, in this instance.

The treatment preparations are in the form of aqueous solutions or emulsions, which may be formulated into shampoos or permanent wave setting lotions (cols. 3 and 5-6). Wisotzki teaches that the sugars are present in the composition in percentages ranging from 0.1% to 8% by weight (col. 2, lines 24-30). This range clearly meets, encompasses and overlaps with Applicant's claimed range of 0.01% to 5.00% (as in instant claims 30 & 52). Moreover, the determination of suitable or effective amounts is within the level of one of ordinary skill in the art, carried out by routine or manipulative experimentation to obtain optimal results, as these are variable parameters attainable within the art. Furthermore, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

The instant invention is drawn to a method of protecting a keratinous fiber from extrinsic damage, comprising application of a composition comprising xylose and derivatives thereof, whereby xylose is present in a range from 0.01% to 5.00%.

Wisotzki teaches a method drawn to hair treatment and caring of mistreated hair and in particular, a method for regenerating, revitalizing or repairing hair comprising applying mono- or disaccharides, more especially the pentoses and hexoses, and in particular, teach that

Art Unit: 1615

monosaccharides such as xylose are suitable for their composition to impart beneficial results (*i.e.*, hair revitalization) (see claim 10). The reference also teaches inclusion of additional sugars such as for instance, glucose, mannose, galactose, sorbose and fructose, which sufficiently meets the additional sugars claimed in instant claims 47-50. Wisotzki further teach effective amounts of the sugars can be used, such as from 0.1% to 8% by weight (see claim 2). Wisotzki teach at col. 6, lines 3-5, that, “in every case, it was found that the hairs had been regenerated, *i.e.*, the split-ends had been partially repaired.”

Moreover, with regards to Applicant’s claimed “method of protecting a keratinous fiber from extrinsic damage”, it is the position of the Examiner, that the teachings of Wisotzki are sufficient to render the instant method obvious because Wisotzki teaches treating and revitalizing hair that has been damaged (*i.e.*, such as by chemical treatments) and teaches applying the same sugar (*i.e.*, xylose) in the same amount (0.1-8%). Thus, it can be reasonably expected that since the composition taught by the prior art is comprised of the same constituents in the same amounts, the prior art's composition would also be fully capable of imparting the same effects and results, such as protection against extrinsic damage. Hence, the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, given the teachings of Wisotzki delineated above.

* * * * *

Response to Arguments

Applicant's arguments filed 02 February 2009 have been fully considered but they are not persuasive.

Art Unit: 1615

▪ **Rejection under 35 U.S.C. 103(a) over Witsozki (USPN 4,900,545):**

Applicant argued, “As discussed at the interview the specification demonstrates the unexpected and surprising benefits of using xylose to treat and protect keratinous fibers from extrinsic damage. Applicants direct the Examiner to these unexpected results to support their position of patentability.

Example 4 of the specification describes the effect of hexoses versus pentoses on damaged hair. Surprisingly, the data reveals that the use of xylose to treat hair as compared to glucose (and other hexoses) significantly improves dry tensile strength and the alpha structure of the bleached hair after 12 heat cycles and the bleached/permed hair after 12 heat cycles (See table 13). Specifically, extrinsic conditions may disrupt the organized structure of the hair fibers, called the alpha structure, which may be accompanied by a decrease in tensile strength. However, Applicants found that the alpha structure of hair treated with xylose is surprising better than hair treated with glucose. The alpha structure for hair treated with glucose is 5.56 ± 1.16 J/g compared to 9.74 ± 2.13 J/g for hair treated with xylose. The dry tensile strength is also improved for hair treated with xylose. As shown in table 13, the dry tensile strength for hair treated with glucose is 913.9 ± 158.2 J/m² compared to $1,204 \pm 215$ J/m² for hair treated with xylose, which clearly indicates the unexpected qualities of the present invention.

Moreover, a similar and significant improvement was also noted when comparing the use xylose versus glucose for wet tensile strength and the alpha structure of the bleached hair after 12 heat cycles and the bleached/permed hair after 12 heat cycles (See table 14). For instance, the wet tensile strength for bleached hair treated with glucose was 187.0 ± 74.8 J/m² as compared to 432.0 ± 137.0 J/m² for hair treated with xylose.

In view of Wistozki, which is expressly prefers glucose, Applicants submit that the teachings of Example 4 indisputably rebuts any suggestion of a prima facie case of obviousness.”

Applicant’s arguments have been fully considered but were not rendered persuasive. A review of the instant specification, particularly Example 4, Tables 13 & 14 establishes that while the tensile strength (i.e., wet/dry) of hair may be improved using xylose (a pentose sugar) as compared with glucose (a hexose sugar), the instant claims are completely silent in terms of tensile strength and are silent in terms of any desired levels of tensile strength to be achieved. Moreover, arguments of unexpected results presented by the specification and in particular Example 4, Tables 13-14 were not persuasive since the Tables referenced by Applicant present

Art Unit: 1615

specific formulations having specific ingredients with specific processing steps formulated under specific conditions (i.e., temperature/relative humidity conditions). The claims, in contrast, are generic and are not representative of these Tables. The claims do not parallel nor reflect the Examples/Tables referenced by Applicant, which Applicant alleges demonstrates the improved properties of tensile strength. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., improved properties of tensile strength) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The instant claims remain broad in that they merely recite a method of protecting a keratinous fiber from extrinsic damage comprising application of xylose in a concentration amount (from 0.01% to 5.00%). The prior art vividly teaches this claimed method using the same sugars (i.e., xylose) as that employed by Applicant. Furthermore, the comparison argued by Applicant between xylose and glucose sugars was not persuasive since Applicant's themselves identify glucose to be a suitable additional sugar, as is evidenced from instant claim 50, for instance, which lists "glucose" amongst a suitable Markush grouping of sugars.

It is respectfully submitted that the instant invention, when taken as a whole, would have been *prima facie* obvious to one of ordinary skill in the art, given the teachings of Wisotzki. Wisotzki expressly teaches a method for the reparation, regeneration and revitalization of hair comprising application of sugars which include xylose and additional sugars (i.e., glucose) in therapeutically-effective concentrations. The prior art teaches a method as is instantly recited

Art Unit: 1615

and would thus result in the *expected* properties of improved strength and/or protection of keratinous fibers, as is claimed by Applicant, absent a showing of evidence to the contrary.

The rejections of record have been maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

This application contains claims 1-29 drawn to an invention nonelected with traverse in the reply filed on 10/17/02. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

-- No claims are allowed at this time.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Humera N. Sheikh whose telephone number is (571) 272-0604. The examiner can normally be reached on Monday-Friday during regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (571) 272-8373. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Humera N. Sheikh/

Primary Examiner, Art Unit 1615

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May 20, 2009

Application/Control Number: 09/614,118

Page 9

Art Unit: 1615